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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,830	11/13/2000	Brian J. Minnis	PHB 34,414	5784

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER
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WANG, TED M

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 12/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/710,830

Applicant(s)

MINNIS ET AL.

Examiner

Ted M Wang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claims 1-10 are pending in the application.

#### *Specification*

2. The disclosure is objected to because of the following informalities: **In page 4 line 11 the reference "42" should be changed to "40".**

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kianush et al. (PT5,715,529).

- In regard claim 1, Kianush et al. discloses a FM receiver including a phase-quadrature polyphase IF filter that quadrature related low IF signals (Fig.1 element M2 and column 4 lines 42-46) are soft limited (Fig.1 elements AL and IF2, and column 5 line35 – column 6 line 46) prior to being demodulated (Fig.1 element DEM and column 6 lines 41-46, and column 5 lines 21-34).
- In regard claim 2, Kianush et al. discloses a FM receiver including a phase-quadrature polyphase IF filter for receiving a wanted data signal modulated on a

carrier signal (Fig.1 column 4 lines 15-41) and for producing quadrature related low IF signals (Fig.1 element M2 and column 4 lines 42-46), soft limiting means for compressing the dynamic range of the quadrature related low IF signals (Fig.1 elements AL and IF2, and column 5 line 35 – column 6 line 46) and signal demodulation means for recovering the data signal (Fig.1 element DEM and column 6 lines 41-46, and column 5 lines 21-34).

- In regard claim 3, the limitation of having an image rejection filter or polyphase filter means for filtering the quadrature related low IF signals can further be taught in Fig.1 element IF2 and AL and column 1 lines 42-63 and column 2 lines 5-25. All other limitation is contained in claim 2. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 4, all limitation is contained in claim 3. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 5, the limitation of amplifying means are coupled to inputs of the image rejection filtering means for adjusting the dynamic range of the quadrature related low IF signals for entry into the image rejection filtering means can further be taught in Fig.1 element RF and column 4 lines 15-19 and Fig.1 element IF2 and column 2 lines 32-43, column 4 line 57 – column 5 line 6, and column 5 line 35 – column 6 line 46 and claims 2-4. All other limitation is contained in claims 2. The explanation of all the limitation is already addressed in the above paragraph.
- In regard claim 6, Kianush et al. discloses a FM receiver with a polyphase filter or harmonic filter RA2 (Fig.1 element RA2, and column 4 line 57 – column 5 line 6)

that coupled between outputs of the soft limiting (Fig.1 element IF2, RA1 and AL and column 5 line35 – column 6 line 46) means and inputs of the signal demodulation (Fig.1 element DEM).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kianush et al. (PT5,715,529) in view of Bijker et al. (PT5,404,589).

- In regard claim 7, Kianush et al. discloses all limitation as described in claim 2 along with a demodulation (Fig.1 element DEM and column 6 lines 41-64) and a data filter (Fig.1 element LPF and column 6 lines 41-64) except specifically teaching that the signal demodulation comprises a polyphase discriminator. All other limitation is contained in claims 2. The explanation of all the limitation is already addressed in the above paragraph.

Bijker et al. discloses a FM receiver with dynamic intermediate frequency (IF) filter tuning that having the signal demodulation comprises a polyphase discriminator (Fig.1 element M3 and SS and column 5 line 58 – column 6 line 7) in order to enhance the FM receiver tuning behaviour.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kianush's FM receiver in view of Bijker's disclosure in order to enhance the FM receiver tuning behaviour.

- In regard claim 8, all limitation can further be taught by Bijker et al. in Fig.3.
- In regard claim 9, the limitation of a receiver comprises those parts of the polyphase receiver as claimed in any one of claim 1 which are integratable can further be taught by Bijker et al. in column 3 lines 21-44. All other limitation is contained in claims 1. The explanation of all the limitation is already addressed in the above paragraph.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kianush et al. (PT5,715,529) in view of Haartsen (PT6,081,697).

- In regard claim 10, Kianush et al. and Bijker discloses a polyphase receiver with all of the limitation except specifically teaching that an integrated transceiver comprises a polyphase receiver as claimed in claim 1 and a transmitter. Haartsen discloses a multi-carrier radio and radio transceiver implementation having an integrated transceiver comprises a polyphase receiver as claimed in claim 1 and a transmitter (column 2 lines 19-48) in order to reduce the cost. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kianush's FM receiver in view of Haartsen's disclosure in order to reduce the cost.

**Conclusion**

8. Reference 6,215,354 and 6,577,855 are cited because they are put pertinent to the IF receiver. However, none of references teach detailed connection as recited in claim.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (703) 305-0373. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Chin can be reached on (703) 305-4714. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
**TECHNOLOGY CENTER 2600**